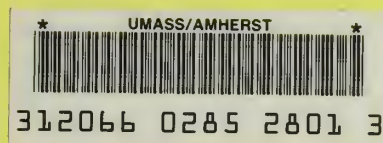




**A Campaign to Prevent Inhalant Abuse**  
Bureau of Substance Abuse Services  
Massachusetts Department of Public Health



## Here's Your Updated Inhalant Abuse Prevention Kit.

Inhalant abuse is a silent epidemic that can only be stopped when parents, educators and the general public get involved before our children do. This kit contains the information and strategies you can use to reduce inhalant abuse in your community.

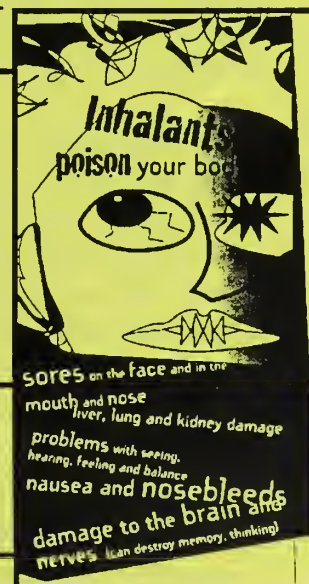
**H**ere are **4** activities you can do in your community to help increase public awareness and prevent inhalant abuse:

**1** **Review these materials.** They contain the most recent Massachusetts data on inhalants and other drugs of abuse as well as strategies for inhalant abuse prevention. New this year is the bulletin, *Nitrous Oxide Alert*. Know the facts about inhalant abuse.

**2** **Get the word out to adults!** Distribute inhalant prevention materials to parents, educators, youth workers, and other concerned individuals. All handouts can be easily copied but materials marked "Adults Only" should not be given to youth as this has encouraged experimentation with inhalants. Contact your local newspapers, cable TV, and radio stations to carry the message.

**3** **Educate Youth.** Distribute copies of *Inhalants Poison Your Body*. (Additional free copies are available at 617-623-2080 or by e-mail: [information@CASPARyouth.org](mailto:information@CASPARyouth.org). The main prevention message is *inhalants are poisons!* Avoid equating inhalants with drugs unless teens are already making that association. Avoid telling youth what products may be misused, how they are abused, or that they can get you "high." Teach about the safe use of products. Choose a science-based approach to comprehensive substance abuse prevention.\*

**4** **Choose Safer Products for your home, school, and community program.** Purchase safer products and reduce access to solvents, gasses and aerosol cans. To obtain a list of substitute products, contact us at [information@CASPARyouth.org](mailto:information@CASPARyouth.org) or 617-623-2080.



Visit our website at <http://www.state.ma.us/dph/inhalant>. If you have any questions or need additional information, please contact the Massachusetts Inhalant Abuse Task Force at CASPAR Youth Services (617-623-2080) or send E-Mail to [information@CASPARyouth.org](mailto:information@CASPARyouth.org).

\*For information about science-based programs, call 1-800-327-5050 to locate your nearest Massachusetts Prevention Center.





## Criminal Justice Practitioners: What You Can Do About Inhalant Use

**Become aware of the problem.** Inhalants are common household, school, and office products inhaled by youth to get “high.” While they are being used as “drugs,” they are, in reality, poisons. Inhalant users are at risk for suffocation, accidents, burns and Sudden Sniffing Death Syndrome (cardiac and/or respiratory arrest). Damage to the nervous system, lungs, liver, and kidneys can also occur. Youth are generally not aware of the dangers of inhalant use and need to be educated. It is also important that parents are educated about the hazards of inhalant use so that they can monitor their children.

**Know what to look for.** Abusable gas- and solvent-based products are found everywhere. They include typewriter correction fluid, air freshener, gasoline, glue, dry erase and permanent markers, and any product packaged in an aerosol can. Examples of paraphernalia are aerosol cans, paper and plastic bags, rags, and soda cans. Gases include propane (used for barbecues), butane (gas lighter refills), nitrous oxide (from tanks and whipped cream containers), halo-genated hydrocarbons (from air conditioners) and any propellant from an aerosol can. Gases may be inhaled from tanks or aerosol cans, or they may be transferred to plastic bags or balloons and inhaled. Slang terms for inhalant abuse, though uncommon in Massachusetts, include sprayers, sprayheads, spray, huffing, sniffing, and bagging. Substances that are *smoked* (such as tobacco, marijuana, or crack cocaine) or *snorted* (such as cocaine) are *not* considered inhalants.

**Inhalant intoxication** looks similar to alcohol intoxication (initial euphoria followed by central nervous system depression), with the same patterns of poor judgment, lack of coordination, and disinhibition. Visual and aural hallucinations often occur. Inhalant users who have been surprised, scared, or chased are at increased risk for heart arrhythmias and fatal heart attacks. Chronic users may be underweight and have rashes around their mouth and nose. They may have hand tremors and problems with memory and thinking.

**Know who is using.** Among Massachusetts sixth-grade children, inhalants are the second most abused substance after alcohol (lifetime use). Among seventh- and eighth-grade children, inhalants are the third most frequently used substance (lifetime use). It's happening in all parts of the Commonwealth and among all types of children. However, the highest proportion of lifetime and current use is among eighth- and ninth-grade children. Use may start as early as the third grade and tends to taper off in high school when other drugs are more available.<sup>1</sup> Youth use inhalants while alone or in groups. Older teens and adults may use inhalants with alcohol and other drugs. There have also been reports of inhalant use while driving.

**Know the laws.** The inhalation of vapors and gases from common, legal products, such as household, school, and office products to get “high” is illegal in Massachusetts (Massachusetts General Law 270-18). Amyl nitrite, referred to as “poppers” and used medically to relieve the pain of angina, comes in an ampule<sup>2</sup> and requires a prescription. Butyl nitrite and isobutyl nitrite,

<sup>1</sup>Massachusetts Dept. of Public Health, “Trends In Substance Abuse Among Public School Students: Triennial Prevalence Survey, 1984-1999,” Massachusetts Department of Public Health, 2000. See “What We Know about Inhalant Abuse in Massachusetts,” another fact sheet in the *A Breath Away, A Campaign to Prevent Inhalant Abuse* series for a summary of data from this report (Available from CASPAR Youth Support Services, 617-623-2080.)

<sup>2</sup>An ampule is a cloth-covered container, smaller than a thimble. When it is crushed, the liquid is released and wets the cloth. The vapors are then inhaled.



sold as "Rush" or "Locker Room," are sold illegally as room odorizers in sex paraphernalia shops and are Class D Controlled Substances (Massachusetts General Law 94C; Section 31). Solvent-based glues and cements sold to minors must contain an irritant (such as oil of mustard), and the law requires that minors present proper identification and register in a permanently bound log (Massachusetts General Law 270-19).

**Policing strategy:** Massachusetts General Law 270-18 is a misdemeanor with the power of arrest. It requires that a police officer observe the use of inhalants for the purpose of producing "intoxication, euphoria, excitement, exhilaration, stupefaction, or dulled senses or nervous system" in order to arrest a person. Once it has been determined that the product is being used illegally, charges may also be brought for purchase, sale, and possession. Be on the alert for drivers appearing to be driving erratically who may be operating the vehicle under the influence of inhalants.

**Juvenile court strategy:** If you suspect or know of inhalant, alcohol, or other drug use, a substance abuse assessment should be performed by a court clinic or local substance abuse clinic. (Contact the Massachusetts Substance Abuse Information and Education Helpline at 1-800-327-5050 or 617-445-1500 to find a community outpatient clinic nearby. These clinics provide free care for indigent clients; others receive care based on a sliding fee or insurance coverage.) Even if it turns out to be a false alarm, your actions send a clear message about substance use. If inhalants, alcohol, or other drugs are a concern, the court may stipulate that a court-involved juvenile follow through on the recommendations of the assessment. In instances where urine tests for drugs are being used, specific tests can be ordered for inhalants.

**If you are concerned** about a child's behavior, be sure to follow up. Ask about inhalants and be specific about why you are concerned. Don't dismiss your gut feelings that something is not right. **REMEMBER, ONE OF THE ATTRACTIONS OF INHALANTS IS THAT ADULTS ARE NOT AWARE OF THEM AND DON'T RECOGNIZE THEIR ILLEGAL USE.** If you have questions about a substance, call the Massachusetts Poison Control Center at 617-232-2120 or 1-800-682-9211.

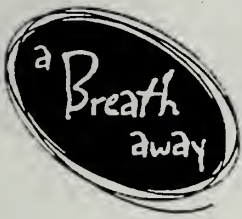
**If you suspect a young person is in crisis because of inhalant intoxication, experts recommend taking these steps:**

- Lay the person on his or her side to prevent aspiration of vomit.
- Call an ambulance.
- See that he or she gets fresh air.
- Remain calm and supportive because scaring or agitating the person may increase the risk of Sudden Sniffing Death Syndrome (cardiac and/or respiratory arrest).
- Minimize distractions and try to keep the person from moving.
- Stay with the person until he or she receives medical attention.

**Don't tolerate any experimentation.** Even limited inhalant use can be fatal. Studies show that almost one-third of the deaths from inhalant use were among first-time users. Seek an alcohol and drug assessment and take appropriate action.

**Make sure youth are getting the message** about the dangers of all substance use including inhalant use. The primary message is that **INHALANTS ARE POISONS AND ARE DANGEROUS LIKE OTHER POISONS.** Care should be taken to not dismiss inhalant use as harmless experimentation. If you are talking to a child or teenager about inhalants, **STRESS WHAT THE DANGERS ARE, NOT WHAT PRODUCTS MAY BE ABUSED OR HOW THEY MAY BE ABUSED.**

**For more information:** Contact your local Massachusetts Prevention Center for videos and written information (call 1-800-327-5050 or 617-445-1500 for the location), the Massachusetts Poison Control Center (617-232-2120 or 1-800-682-9211) or the Massachusetts Inhalant Abuse Task Force (617-623-2080).



**A Campaign to Prevent Inhalant Abuse**  
Bureau of Substance Abuse Services  
Massachusetts Department of Public Health

# Massachusetts Laws about Inhalant Abuse

## Massachusetts General Law

### Chapter 270 Crimes Against Public Health

#### **Section 18. Substance having property of releasing toxic vapors**

No person shall intentionally smell or inhale the fumes of any substance having the property of releasing toxic vapors, for the purpose of causing a condition of intoxication, euphoria, excitement, exhilaration, stupefaction, or dulled senses or nervous system, nor possess, buy or sell any such substance for the purpose of violating or aiding another to violate this section.

This section shall not apply to the inhalation of anesthesia for medical or dental purposes.

Whoever violates the provisions of this section shall be punished by a fine of not more than two hundred dollars or by imprisonment for not more than six months, or both.

Any person who is discovered by a police officer or special police officer in the act of violating this section may be arrested without a warrant by such police officer or special police officer, and held in custody, in jail, or otherwise, until a complaint is made against him for such offense which complaint shall be made as soon as practicable and in any case within twenty-four hours, Sundays and legal holidays excepted.

#### **Section 19. Glue or cement; sale to minors; smelling deterrent ingredients**

Any person who sells glue or cement to a minor shall require such minor to properly identify himself and write his name and address legibly in a permanently bound register. The seller shall keep such register available for police inspection for a period of six months after the last sale is recorded therein. No such glue or cement shall be sold to a minor unless it contains allyl isothiocyanate (oil of mustard) or some other equally effective and safe deterrent against smelling or inhaling the fumes of such glue or cement.

As used in this section, "glue" or "cement" shall mean any glue or cement that contains a solvent or chemical having the property of releasing toxic vapors.

Whoever violates the provisions of this section shall be punished by a fine of not more than two hundred dollars or by imprisonment for not more than six months, or both.



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The Massachusetts Department of Public Health  
Bureau of Substance Abuse Services

## BULLETIN

### Inhalant Abuse Alert

**Introduction:** This bulletin is being issued to alert education, healthcare, and other youth-serving professionals about the little-known problem of inhalant abuse among youth. In 1999, 17.3% of Massachusetts students in grades 7-8 reported trying inhalants at least once and 5.7% used inhalants in the last thirty days. Inhalants are the third most abused substance (after alcohol and tobacco) for Massachusetts seventh- and eighth- graders.<sup>†</sup>

**What is Inhalant Abuse:** Inhalant abuse is the intentional breathing in of gas and vapors with the goal of getting high. It does *not* refer to snorting cocaine or smoking substances such as tobacco, marijuana, crack cocaine or opium. There are over 1,000 common household, school, and industrial products that can be abused. Typical substances include gasoline, paint thinner, nail polish remover, typewriter correction fluid, butane (cigarette lighters), propane (barbecues), halogenated gases (air conditioners and fire extinguishers), nitrous oxide (laughing gas), permanent and dry erase magic markers, many glues and adhesives, and aerosol cans containing paint, deodorant, hair spray, stain guards, air freshener, insecticides, and whipped cream. For questions about the toxic effects of a substance, contact the Massachusetts Poison Control Center at 617-232-2120 or 1-800-682-9211.

**How Inhalants are Used:** Aerosols are often sprayed into a plastic or paper bag and the vapors are inhaled from the bag, or they can be directly sprayed into the mouth or nose. Solvents can be poured on a rag or sleeve and the vapors inhaled. Solvents and aerosols can be put into a soda can or other container and the vapors can be breathed directly. Correction fluid can be painted on the finger nails and inhaled. Permanent magic markers and dry erase markers are directly inhaled. Nitrous oxide is usually inhaled from a balloon.

**Who is at Risk:** Studies by the Massachusetts Department of Public Health show that all youth are at risk for inhalant abuse. The proportion of students reporting inhalant abuse is highest among eighth- and ninth-grade youth. After tenth grade use tends to decrease.<sup>†</sup>

**Patterns of Abuse:** There are many patterns of use, depending on the age, ethnicity and size of the community. Some inhalant users report experimentation as early as the third or fourth grade. Often, they learn about inhalants from a friend or family member, television, or through word-of-mouth, but rarely are they aware of the dangers. Inhalants may be used alone or with a small group of peers. They are attractive to children because they are easy to obtain, free or inexpensive, difficult to detect, and many adults are not aware of the problem and don't take use seriously. Unlike other substances, inhalants are legal to possess for their intended use; although in Massachusetts, the possession, use, purchase or sale of these products for the purpose of causing intoxication is illegal [Massachusetts General Law, Chapter 270-18].

**Effects of Inhalant Use:** Inhalants produce an effect within seconds that may last from fifteen to forty-five minutes. These substances generally act as central nervous system depressants. After an initial euphoria, a depressed state follows that can be accompanied by sleepiness or sleep. Inhalants lower breathing and heart rates and impair coordination and judgment. Dosages are repeated to maintain intoxication.

**Dangers of Use:** Inhalants can cause severe and permanent damage to the brain, peripheral nerves, kidneys, liver, bone marrow, and other organs. Some inhalants cause chromosome and fetal damage much like Fetal Alcohol Syndrome. More than any substance, inhalants can cause sudden death resulting from heart arrhythmia and suffocation. Chronic inhalant users can develop physical addiction (with tolerance and withdrawal symptoms) and psychological dependence.

**Signs:** There are several signs associated with inhalant abuse. If you suspect a child or adolescent is abusing inhalants, watch for:<sup>††</sup>

- Discarded product containers
- Bags, rags, gauze, or soft drink cans used to inhale the fumes
- Traces of odors of paint, gasoline, or glue

**Physical symptoms of abuse may include:**

- Facial rash
- Blisters or soreness around the nose, mouth, or on the lips
- Runny nose and frequent sniffing
- Irritated or glazed eyes and dilated pupils
- Frequent unexplained coughing
- Hand tremors
- Unusual harsh breath odor

**A person who is intoxicated from sniffing inhalants may exhibit:**

- Extreme mood swings
- Uncontrolled laughter
- Grandiose and hostile speech
- Bizarre risk-taking
- Increased irritability and anger
- Violent outbursts
- Nausea, loss of appetite, vomiting
- Hallucinations and convulsions

**What do you do if you suspect a young person is in crisis**

**as a result of inhalant intoxication? Experts recommend several steps:**

- Lay the person on his or her side to prevent aspiration of vomit.
- Call an ambulance.
- See that he or she gets fresh air.
- Remain calm and supportive. Agitating the person may increase the risk of Sudden Sniffing Death Syndrome.
- Minimize distractions and try to keep the person from moving.
- Stay with the person until he or she receives medical attention.

**Assessment Considerations:** 1) Because inhalants are seen by many substance abusers as "low status" or "childish", children may be especially reluctant or embarrassed to admit use. 2) Many youth confuse "inhaling" with "smoking" or "snorting." For example, you might ask, "Have you ever inhaled anything to get high? For instance, the gases or fumes or vapors from household products or products used in a shop, art projects or a garage. I am not talking about anything you might *smoke*, like tobacco, marijuana, or crack or anything you might *snort* like cocaine." 3) Because youth are generally not aware of the special dangers of inhalants, any child who has experimented with them even once should receive inhalant prevention education. Parent education is also essential.

**Treatment Considerations:** 1) Individuals who are regular users of inhalants can take thirty to forty days or more to detoxify. Adequate detoxification is crucial to successful treatment. 2) Inhalants can produce both psychological dependence and physical addiction. Withdrawal symptoms may include hand tremors, nervousness, excessive sweating, hallucinations, chills, headaches, abdominal pain, muscular cramps, and delirium tremens. 3) Inhalant abusers have very high relapse rates. Aftercare and follow-up are extremely important.<sup>‡</sup>

**Treatment Options:** Through its network of community providers, the Massachusetts Department of Public Health supports outpatient and residential programs for youth who are abusing inhalants and other drugs. For information on programs, call the Massachusetts Substance Abuse Information and Education Helpline (617-445-1500 in the Boston metropolitan area or 1-800-327-5050 statewide).

**Prevention Strategies:** Telling youth about the names and types of abusable products increases the likelihood that some youth will experiment with inhalants. A key prevention message is that inhalants should be equated with poisons, pollutants, and toxins, and not drugs. Children should not be taught what products can be abused, rather the damaging effects of inhalants should be stressed.<sup>‡‡</sup> Other strategies include teaching inhalant refusal skills; supporting positive youth development and leadership; and educating parents and other community members. For more information on inhalant prevention, contact your local Massachusetts Prevention Center (To find the location near you, call 617-445-1500 in the Boston metropolitan area or 1-800-327-5050 statewide) or the Massachusetts Inhalant Abuse Task Force (617-623-2080).

**Sources:**

<sup>†</sup> Massachusetts Dept. of Public Health, "Trends in Substance Abuse Among Public School Students: Triennial Prevalence Survey, 1984-1999," 2000.

<sup>‡</sup> Riedel, Steven, "Inhalants: A Growing Health Concern," Behavioral Health Management, May-June 1995, V15, N3, P28(3).

<sup>††</sup> ———, "A Breath of Death," Adolescence, September 1993

<sup>‡‡</sup> Groves, Mark, Sniffing and Huffing: A Comprehensive Guide for the Prevention and Treatment of Children's Inhalant Abuse, The Eden Statewide Children's Chemical Health Services Project, Minneapolis, MN, 1996 (Phone: 612-874-9441).





The Massachusetts Department of Public Health  
Bureau of Substance Abuse Services

## BULLETIN

### Nitrous Oxide Alert

**Introduction:** Nitrous oxide ( $N_2O$ ), also known as "laughing gas," is a colorless, odorless, weak anesthetic gas that is being abused for its drug-like effects by teenagers and adults. Many people are unaware of the dangers of active inhalation (as a form of *inhalant abuse*) or chronic low level exposure (in medical, dental, and veterinary settings). The Massachusetts Department of Public Health is issuing this bulletin to alert youth-serving professionals and the public about the dangers of chronic exposure and especially non-medically supervised use of this gas.

The Massachusetts Department of Public Health is seeking to reduce the accessibility of  $N_2O$  by enlisting the cooperation of law enforcement, retailers, and wholesale distributors in curtailing the illegal use of nitrous oxide. Retailers are asked to monitor the sale of whipped cream chargers and canned whipped cream. Wholesale distributors are asked to restrict sales and sell only to clearly identified legitimate users. People responsible for the sale of nitrous filled balloons at concerts and sporting events, a clear violation of Massachusetts Law, should be prosecuted.

**Why is nitrous oxide dangerous?**  $N_2O$  is a central nervous system depressant that is absorbed through the lungs and is rapidly distributed throughout the body. It can cause health problems, accidents, and death. Frostbite damage to the throat and vocal cords results when the gas is inhaled directly from high pressure tanks; it becomes very cold when it changes from a liquid in the tank to a gas as it leaves the tank. Accidents result when impaired users have toppled heavy tanks onto themselves. Long term exposure, even at very low levels, may result in infertility or a vitamin  $B_{12}$  deficiency (which causes anemia and nerve degeneration, producing painful sensations in the arms and legs, an unsteady gait, loss of balance, irritability, and intellectual deterioration).<sup>1</sup>

**How does nitrous oxide cause death?** Most deaths are caused by suffocation. Breathing the pure gas without sufficient oxygen will produce asphyxiation. This occurs when the gas is used without auxiliary oxygen or in a small enclosure such as when a plastic bag is used as a hood, or in a bathroom, closet, or car. Also, a user may be breathing the gas from a plastic bag, lose consciousness, and choke on the bag as it is sucked into the mouth. Another danger is choking on vomit while unconscious. Exposure to concentrations of  $N_2O$  in excess of 10% combined with oxygen deficiency will compromise a person's ability to think and act safely and has been a factor in deaths related to accidents and car crashes.

**What are the patterns of  $N_2O$  abuse?** Most abusers are using the gas occasionally. Nitrous is being used at parties, in dormitories, fraternities, and at concerts and sporting events. There are a number of reports of abuse by dentists,<sup>2</sup>

though this has decreased as more dental personnel have become aware of the dangers.<sup>3</sup> Restaurant workers may obtain  $N_2O$  from whipped cream dispensers. At least one study has shown that nitrous oxide may be addictive.<sup>4</sup>

**What are the workplace dangers?** While medically approved for patients when used as an anesthetic, health concerns have been raised for medical, dental, and veterinary personnel exposed to long term, low levels of nitrous oxide in the workplace. The National Institute for Occupational Safety and Health (NIOSH) has concluded that, "exposure to  $N_2O$  causes decreased mental performance, audiovisual ability, and manual dexterity. Data from animal studies demonstrate that exposure to  $N_2O$  may cause adverse reproductive effects such as reduced fertility, spontaneous abortion, and neurological, renal, and liver disease." In medical settings where  $N_2O$  is utilized, NIOSH recommends scavenger systems to remove exhaled  $N_2O$  from the air and maintain an ambient level of less than 25 parts per million.<sup>5</sup>

**What are the legal issues?** In Massachusetts, inhalant abuse is illegal [Massachusetts General Law, Chapter 270-18. See [www.state.ma.us/dph/inhalant](http://www.state.ma.us/dph/inhalant)]. However, the law has been difficult to enforce because it requires a sworn officer to witness the sale, purchase or use of an inhalant. Recently, there has been a successful prosecution in the death of a Virginia student based on the Federal Food, Drug, and Cosmetic Act. The owner of a web site was convicted for selling the nitrous oxide in "whippets" as a drug.<sup>6</sup> "Whippets" are whipped cream chargers—small metal cartridges about 2½ inches long.

**What are the effects of nitrous oxide on the human body?** The painkilling and numbing qualities of nitrous oxide begin to take effect when the gas is at concentrations of 10 percent. At higher concentrations, approaching 50%, a sense of well-being or euphoria is experienced. A person experiencing the effects of nitrous oxide may:

- Have slurred speech
- Have difficulty in maintaining his or her balance or walking
- Be slow to respond to questions
- Be immune to any stimulus such as pain, loud noise, and speech
- Lapse into unconsciousness (at higher concentrations)

If a person remains conscious and stops breathing the nitrous oxide, recovery can occur within minutes. A person who is rendered unconscious by nitrous oxide is likely to stop breathing within a few seconds as a result of a depressed central nervous system—brain, brain stem, and spinal cord. This depression is caused by a combination of the effects of nitrous oxide and the lowered oxygen content that occurs as pure  $N_2O$  displaces oxygen from the lungs with each succeeding inhalation of the gas. The end result is that the person can be asphyxiated.

Death usually occurs when abusers, in their attempt to achieve a higher state of euphoria, breathe pure N<sub>2</sub>O in a confined space – in a small room or an automobile, or by placing their head inside a plastic bag. Tragedy can occur very quickly. Prolonged exposure to high concentrations of N<sub>2</sub>O without supplemental oxygen, or a series of inhalations (without breathing clean air between inhalations) can result in death. This can happen in seconds. Since the narcotic effect of a single breath of nitrous oxide is very brief (lasting for only seconds), abusers tend to repeatedly inhale in order to stay “high,” increasing the danger. With N<sub>2</sub>O, there is no sensation of choking or gasping for air to warn the abuser that asphyxiation is imminent. A person who loses consciousness, and continues to inhale the pure gas, will die.<sup>7</sup>

#### **How does nitrous oxide get into the hands of abusers?**

Nitrous Oxide is readily available and can be obtained from many different commercial, medical, and retail sources. It is found in homes, schools, restaurants, and medical and industrial settings where it is often easily accessible and not closely regulated. Used to foam dairy cream, it is found in canned whipped cream and whipped cream chargers (“whippets”). A small device called a “cracker” is used to break the seal on the cartridge and release the gas so it may be stored in a heavy duty balloon. The cartridges are easily available at restaurant supply stores, kitchen stores, “head shops,” hardware stores, and over the internet. Whipped cream cans may be purchased or stolen from grocery and convenience stores or found in the home, cooking programs or restaurants.

Large tanks of nitrous oxide are stolen from hospitals, delivery trucks, and dental offices or purchased from commercial gas suppliers under the pretext of legitimate use. Balloons filled from the tanks are illegally sold at concerts and sporting events or distributed at parties and in college dormitories. Nitrous oxide cylinders range in size from roughly two feet in height to more than five feet and are color-coded light blue. Contents range from about six pounds to more than sixty pounds of liquid in a large cylinder. Depending on cylinder size and product purity, legitimate users pay between \$40 and \$75 per cylinder. The highest purity level, used in semiconductor processing, costs considerably more.

Welding supply companies and auto supply stores are another source of nitrous oxide tanks. These tanks are black and the gas is denatured by adding sulphur dioxide. This product may be transfilled into smaller cylinders and sold without being labeled as denatured.<sup>7</sup>

**What do you do if you suspect a young person is using nitrous oxide use?** Experts recommend several steps during a crisis:

- See that he or she is quickly removed from the source of N<sub>2</sub>O and gets fresh air.
- If not breathing, administer artificial respiration.

- Call an ambulance.
- Stay with the person until he or she receives medical attention.
- For more information, call the Massachusetts Poison Control Center at 1-800-222-1222 [TTY: 1-888-244-5313].

**Assessment Issues:** 1) Because inhalants are seen by many substance abusers as “low status” or “childish,” adults and teenagers may be especially reluctant or embarrassed to admit use. 2) Many youth confuse “inhaling” with “smoking” or “snorting.” For example, you might ask, “Have you ever inhaled anything to get high, such as the gases or fumes or vapors from household products or products used in a shop or a garage or in an art project. I am **not** talking about anything you might *smoke*, like tobacco, marijuana, or crack or anything you might *snort* like cocaine.” 3) Because people may not be aware of the special dangers of inhalants, anyone who has experimented with them even once should receive inhalant abuse prevention education. Parent education and involvement is also essential.

**Treatment Considerations:** Nitrous oxide abuse as well as other types of inhalant abuse will often be part of a larger picture of substance abuse which may require treatment. In addition, inhalant abusers have very high relapse rates. Aftercare and follow-up are extremely important.

**Treatment Options:** Through its network of community providers, the Massachusetts Department of Public Health supports outpatient and residential programs for people who are abusing inhalants and other substances. For information on programs, call the Massachusetts Substance Abuse Information and Education Helpline (617-445-1500 in the Boston metropolitan area or 1-800-327-5050 statewide).

**What can be done to prevent inhalant abuse?** Telling youth the names and types of products that can be abused increases the likelihood that some youth will experiment with inhalants. A key prevention message is that products should be used for their intended purpose and in a safe manner. Inhalants should be equated with poisons, pollutants, and toxins, and **not** drugs. Children should not be taught what products can be abused or that they can be used “to get high”; rather the damaging effects of inhalants should be stressed. Other strategies include teaching refusal skills; supporting positive youth development and leadership; and educating parents and other community members. To learn more about comprehensive, science-based prevention, contact your local Massachusetts Prevention Center (to find the location, call the Massachusetts Substance Abuse Information and Education Helpline (617-445-1500 in the Boston metropolitan area or 1-800-327-5050 statewide). Additional information and materials can be obtained from the Massachusetts Inhalant Abuse Task Force at CASPAR Youth Services (617-623-2080), or visit our web site [www.state.ma.us/dph/inhalant](http://www.state.ma.us/dph/inhalant).

1. “Nitrous Oxide Fact Sheet.” Compressed Gas Association [[www.cganet.com](http://www.cganet.com)] Arlington, VA [703-412-0900] See also, “Occupational Safety and Health Guideline for Nitrous Oxide.” Occupational Safety and Health Administration [[www.osha-slc.gov/SLTC/healthguidelines/nitrousoxide](http://www.osha-slc.gov/SLTC/healthguidelines/nitrousoxide)]

2. Paulson, G. W. “Recreational Misuse of Nitrous Oxide.” *Journal of the American Dental Association*. 1979 March 98(3): 410-1.

3. NIOSH [1996] “Control of Nitrous Oxide in Dental Operatories.” US Public Health Service, Centers for Disease Control, National Institute for Occupational Safety Publication No. 96-107. [[www.cdc.gov/niosh/nitoxide.html](http://www.cdc.gov/niosh/nitoxide.html)]

4. Gilman, M. “Review: Nitrous Oxide in Perspective.” *Clinical Neuropharmacology* (1992) 15:pp297-306.

5. NIOSH [1994]. “NIOSH Alert: Request for Assistance in Controlling Exposure to Nitrous Oxide During Anesthetic Administration.” US Public Health Service, Centers for Disease Control, National Institute for Occupational Safety Publication No. 94-100, April 1994 [[www.cdc.gov/niosh/noxidalr.html](http://www.cdc.gov/niosh/noxidalr.html)]

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A Campaign to Prevent Inhalant Abuse  
Bureau of Substance Abuse Services  
Massachusetts Department of Public Health

# Youth Services Providers:

## Here's What You Can Do About Inhalant Abuse

**Become aware of the problem.** Educate yourself and others about inhalant abuse including what types of products can be abused and the signs of abuse.

**Make sure youth are getting the message** about the dangers of all substance abuse and inhalant abuse. The main prevention message is that INHALANTS ARE POISONS AND ARE DANGEROUS LIKE OTHER POISONS. Care should be taken to avoid advertising what products can be abused or how they can be abused. Inhalant abuse prevention activities should be provided in conjunction with alcohol and other drug prevention activities. Another approach is Peer Education Programs, where youth teach other youth health information and behaviors. Prevention activities should begin with elementary school aged youth since use may begin in third or fourth grade and peaks in seventh and eighth grade.

**Don't use products that can be easily abused.** Many abusable solvent based products are found in community centers. These include typewriter correction fluids, glues made with solvents, and dry erase and permanent markers. Instead use water-based versions of these products.

**Be aware of how much of an item is being used.** If solvent based products are used, they should be used under close adult supervision. These include spray paints, solvent based glues, gasoline, paint thinners, and many products packaged in aerosol cans. If it seems like too much is being used, ask questions and monitor the situation closely.

**If you are suspicious** about a child's behavior, be sure to follow up. Ask them about inhalants and be specific about why you are suspicious. Don't dismiss your gut feelings that something is not right. REMEMBER, ONE OF THE ATTRACTIONS OF INHALANTS IS THAT ADULTS ARE NOT SUSPICIOUS OF IT AND DON'T RECOGNIZE USE. If you have questions about a substance, call the Massachusetts Poison Control Center at 617-232-2120 or 1-800-682-9211.

**Don't tolerate any experimentation** Remember even limited use can be fatal. Seek an alcohol and drug assessment and take appropriate action. Even if it turns out to be a false alarm, your action sends a clear message about your expectations.

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# Massachusetts Prevention Centers

*Resources for Building Healthy Communities*

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## Examples of Inhalants in the School, Home, and Office and Safer Alternatives

Product Type	Source of Inhalant	Prevention Strategies		
		Use "Water-Based" Products	Supervise Use of Solvent-based Products	Other Strategies
General Supplies	Cements and glues	✓	✓	
	Typewriter correction fluid	✓	✓	Better idea: Use "Correction Tape"
	Magic markers, dry erase markers	✓	✓	Better idea: Use "Low Odor" markers
Cleaning Supplies	Any product in an aerosol can			Use hand pumps instead of aerosol cans
	Aerosol air fresheners and deodorizers		✓	Use solid air fresheners
	Computer cleaner ("duster")		✓	Use canned carbon dioxide
Wood Shop	Paints, varnishes, stains, paint thinner	✓	✓	
	Contact cement	✓	✓	
Art Supplies	Rubber cement	✓	✓	
	Printing inks	✓	✓	
	Spray paints and clear finishes	✓	✓	
Auto	Degreasers, spray lubricants, solvents, Freon®, brake fluid, gasoline, lacquers, lacquer thinners		✓	
Health and Beauty	Nail polish and nail polish remover, hair spray		✓	
	Deodorants		✓	Use stick deodorants
Cooking Supplies	Cooking spray		✓	Use oil in a spray pump
	Whipping cream in aerosol cans, whipping cream cartridges (whippets)		✓	Use whipped cream in a tub or make from scratch

### Strategies for Decreasing the Risk of Inhalant Abuse

1. Identify products that can be abused. One clue is a label warning: "Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal." (From a can of cooking spray); "Avoid breathing vapors." (From a can of paint); "Use in a well ventilated area." (From a can of spray lubricant).

2. Find non-toxic substitutes. Many products such as correction fluid, glues, magic markers, paints and stains have 'water based' or 'non-toxic' versions. Be aware that some products marked with an "AP Non-Toxic" label contain solvents and are being abused by students.

3. When a safer product cannot be substituted, use under close supervision. Account for usage, check product inventory going in and out, and be aware of disappearing supplies.

4. Don't discuss specific products—this may arouse curiosity and lead to increased experimentation. Teach children about the dangers of vapors and gases and about safe use of products. Avoid making the connection that these products can be used as drugs and always stress that these products are dangerous *poisons, toxins, and pollutants*. A chart like the one above is intended for adults only.







# General Guidelines for Inhalant Abuse Prevention Programming

**1. Inhalant Abuse Prevention Education should be done as part of a general substance abuse education series, not as an isolated focus or to the exclusion of other types of drug education.** It should contain the following components of successful substance abuse prevention programs:

- ◆ Include accurate, fact-based information about the short-term as well as long-term health effects of inhalants and other substances. Avoid "scare tactic" approaches.
- ◆ Create norms that make inhalant use unacceptable and unpopular. Research indicates that youth tend to overestimate the rates of use among their peers. Most youth are not experimenting with these dangerous substances.
- ◆ Foster positive, supportive, sustained connections between youth and role models (other young people as well as adults).
- ◆ Utilize activities that provide youth opportunities to practice newly-learned skills (such as decision-making skills or refusal strategies) and to pass their knowledge on to others.
- ◆ Develop linkages to other resources (such as school, family, community or other youth-serving agencies) as necessary.

**2. Education concerning inhalants must be carefully designed to avoid creating a "how to" primer for experimenters.** It should avoid discussing in detail administration and paraphernalia of inhalants and should instead reinforce personal responsibility, optimal health and well-being. Discussions should emphasize that these products are designed for a specific purpose and they can be dangerous when used in unintended ways. Mark Groves, Program Director of the Eden Youth Inhalant Abuse Training and Information Project, says:

"You don't tell kids how to do it, you tell kids what it may do to them. These products are poisons, and kids who 'sniff' or 'huff' are polluting their bodies. The media has conditioned kids to understand that pollution is bad. We should take advantage of that when teaching kids about inhalants."

**3. Include parents and teachers in your inhalant abuse prevention education outreach.** Parents can impact youth of all ages by demonstrating proper usage of chemicals and by discussing safety issues related to inhalable substances. Even at the youngest ages, children can learn by imitation. Our recommendation is that educational materials that contain the types of products that can be abused or how they are used be mailed to parents directly. Teachers of art, technology, and science can have an important role in inhalant abuse prevention by including lessons on safety issues relating to inhalable substances.

In summary, norm-setting prevention education, skill-based strategies and activities, and positive role-modeling are the most effective tools we have for preventing inhalant abuse.

# THE HISTORY OF THE

## REPUBLIC OF THE UNITED STATES OF AMERICA

From the first settlement of the continent to the present day, the history of the United States has been a story of growth, struggle, and achievement. The early years were marked by the struggle for independence from British rule, followed by a period of territorial expansion and the development of a unique political system.

The American Revolution was a pivotal moment in the nation's history, leading to the establishment of the United States as an independent country. The new nation faced numerous challenges, including the struggle for unity and the development of a federal government. The Constitution was drafted to provide a framework for the new government, and the Bill of Rights was added to protect individual liberties.

The 19th century was a period of rapid growth and change. The United States expanded its territory westward, and the economy began to industrialize. The Civil War was a defining moment in the nation's history, leading to the abolition of slavery and the strengthening of the federal government. The Reconstruction era followed, as the nation sought to rebuild and reunite itself.

The 20th century has been a period of great achievement and challenge. The United States emerged as a world superpower, leading the world in the development of nuclear energy and space exploration. The Great Depression and World War II were major challenges, but the nation emerged stronger and more united. The civil rights movement of the 1950s and 1960s led to significant progress in the fight for equality.

The future of the United States is uncertain, but the nation's history suggests that it will continue to grow and thrive. The American dream of a better life for all remains a guiding principle, and the nation's values of freedom, democracy, and justice will continue to shape its destiny.



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# Teachers:

## Here's What You Can Do About Inhalant Abuse

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**Be aware of how much of an item is being used.** If solvent based products are used, they should be used under close adult supervision. These include spray paints, solvent based glues, gasoline, paint thinners, and many products packaged in aerosol cans. Many abusable solvent based products are found in art, shop, cosmetology, science, and culinary arts classrooms. If it seems like too much is being used, ask questions and monitor the situation closely.

**If you are suspicious** about a child's behavior, be sure to follow up. Ask them about inhalants and be specific about why you are suspicious. Don't dismiss your gut feelings that something is not right. REMEMBER, ONE OF THE ATTRACTIONS OF INHALANTS IS THAT ADULTS ARE NOT SUSPICIOUS OF IT AND DON'T RECOGNIZE USE. If you have questions about a substance, call the Massachusetts Poison Control Center at 617-232-2120 or 1-800-682-9211.

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AUDIENCE: Adults Only

## What We Know About Inhalant Abuse in Massachusetts

**What is being used:** Inhalants include fuels (butane, propane, gasoline), solvents, paints and paint thinners, glues and adhesives, engine starting sprays, computer cleaners, permanent magic markers, dry erase markers, typewriter correction fluid, nail polish remover, dry-cleaning agents, certain gases (from air conditioners and fire extinguishers, nitrous oxide from cans of whipped cream), air fresheners and any product packaged in an aerosol can.

### Who is abusing inhalants in Massachusetts:

- ◆ Among Massachusetts seventh- and eighth- grade children, inhalants are the third most abused substance after alcohol and tobacco (for lifetime use<sup>1</sup>).<sup>†</sup>
- ◆ It's happening in all parts of the Commonwealth and among all types of children. However, the highest proportions of reported lifetime use<sup>1</sup> are among eighth- (19.8%) and ninth-grade (20.2%) children.<sup>†</sup>

**Patterns of use:** There are many patterns of inhalant abuse. These patterns vary across the Commonwealth and by age, sex, and race/ethnicity. For some children, this is not just experimentation but an addiction. Use may start as early as the third grade. Younger children may just use inhalants while older youth are more likely to use inhalants with alcohol and other drugs.

Massachusetts Lifetime and Current Use  
of Inhalants and Other Drugs, Grades 6-12, 1999<sup>1</sup>

The five drugs most used by Massachusetts students:	Percent Lifetime Use <sup>1</sup>			Percent Current Use <sup>2</sup>		
	6 <sup>th</sup> Grade	7 <sup>th</sup> -8 <sup>th</sup> Grade	9 <sup>th</sup> -12 <sup>th</sup> Grade	6 <sup>th</sup> Grade	7 <sup>th</sup> -8 <sup>th</sup> Grade	9 <sup>th</sup> -12 <sup>th</sup> Grade
Alcohol	31.8	57.4	82.0	9.0	25.0	55.9
Cigarettes	7.0	24.0	52.0	2.4	12.6	29.9
Marijuana/Hashish	3.0	14.7	50.3	0.6	7.6	30.2
Inhalants	8.4	17.3	15.7	2.3	5.7	4.3
Tranquilizers	3.8	9.9	19.6	0.5	3.1	8.6

1. Used at least once in lifetime. 2. Used at least once in 30 days prior to survey. N = 6980

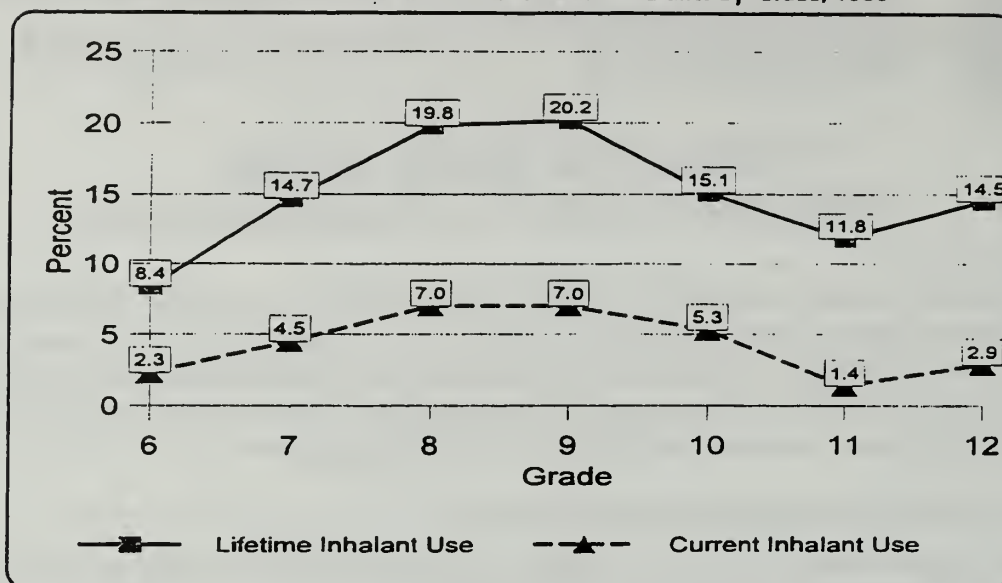
Massachusetts Lifetime and Current Use of Inhalants  
by Ethnicity, Grades 7-12, 1999<sup>1</sup>

(N = 5826)	White	Black	Hispanic	Asian	All
Lifetime <sup>1</sup>	17.2%	12.2%	13.1%	13.2%	16.3%
Current <sup>2</sup>	5.0%	3.0%	5.5%	4.2%	4.8%

1. Used at least once in lifetime. 2. Used at least once in 30 days prior to survey.



Massachusetts Lifetime and Current Use of Inhalants by Grade, 1999<sup>†</sup>



**What Massachusetts adolescents say they like about inhalants:** In a Massachusetts study<sup>‡</sup>, experienced drug users talked about what attracted them to inhalants:

**Users liked the “trippy” feeling of the high.** They likened it to acid and other hallucinogens. One woman described her use of an aerosol tire repair product, as an ‘industrial high’: “When you smoke pot, you relax. When you do an industrial high, you get all the noises going in your head. It’s sort of like going insane.”

**They are readily available:** Teens, especially teens experienced with alcohol and other drugs, were very aware of how to obtain inhalants. They knew they were in their homes, and mentioned hardware stores, convenience stores, drug stores, and art, graphic arts, and shop classes as places to obtain inhalants. Drug stores were especially seen as good sources of supply:

“It’s ten times easier to get. Just walk into a (names a drug store chain), stick it in your pocket and walk out. There you go! . . . Inhalants are easier to get than anything else. It’s easier to get an inhalant than it is to buy a bag of pot, and they are ten times deadlier.”

**They don’t arouse suspicion:** “It’s easy to get. You don’t need no ID. You just go in the store and buy it. Drug stores, hardware stores. [Interviewer: “Do they ever ask what you need it for?”] They don’t ask you, they just figure you need it. Nobody is thinking they get high off this stuff.”

“People, their parents, won’t know ‘cause they got it right underneath their noses. It’s not like they are bringing something in the house because it’s already in the house.”

**They are incorrectly assumed to be legal:**<sup>††</sup> “Some people want to do it (drugs) in their houses. But if their parents find weed or something, they’ll kill them. Glue, it’s always around the house.”

“You can’t get arrested for carrying it. You could just have it in your pocket.”

**They are free or inexpensive:** “. . . The only time I would really use them is if I really didn’t have anything else . . . because I knew how much they would screw up your brain. Not that other drugs don’t screw up your brain or melt brain cells. I know that they can really screw up your mind and (you can) die real easy from them. So the only time I would do it or think about doing it is if I didn’t have money for any other drug because this stuff is practically free. . . . The only time I would pay for an inhalant would be nitrous oxide like at a concert or something.”

**They take effect quickly:** “When it first hits you, you sort of sit there for a second. But as it’s going on, you go like . . . wow. And then it’s over.”

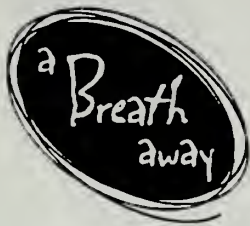
“It only takes two seconds to get high, marijuana takes a while.”

<sup>†</sup> “Trends in Substance Abuse Among Public School Students: Triennial Prevalence Survey, 1984-1999,” Massachusetts Department of Public Health, 2000.

<sup>‡</sup> Report on Inhalant Abuse Focus Group Project, Massachusetts Department of Public Health, 1995.

<sup>††</sup> While these products are legal to possess and use for their intended purpose, it is illegal in Massachusetts to possess, buy, sell or use these products for the purpose of causing intoxication (Massachusetts General Law, Chapter 270, Section 18).



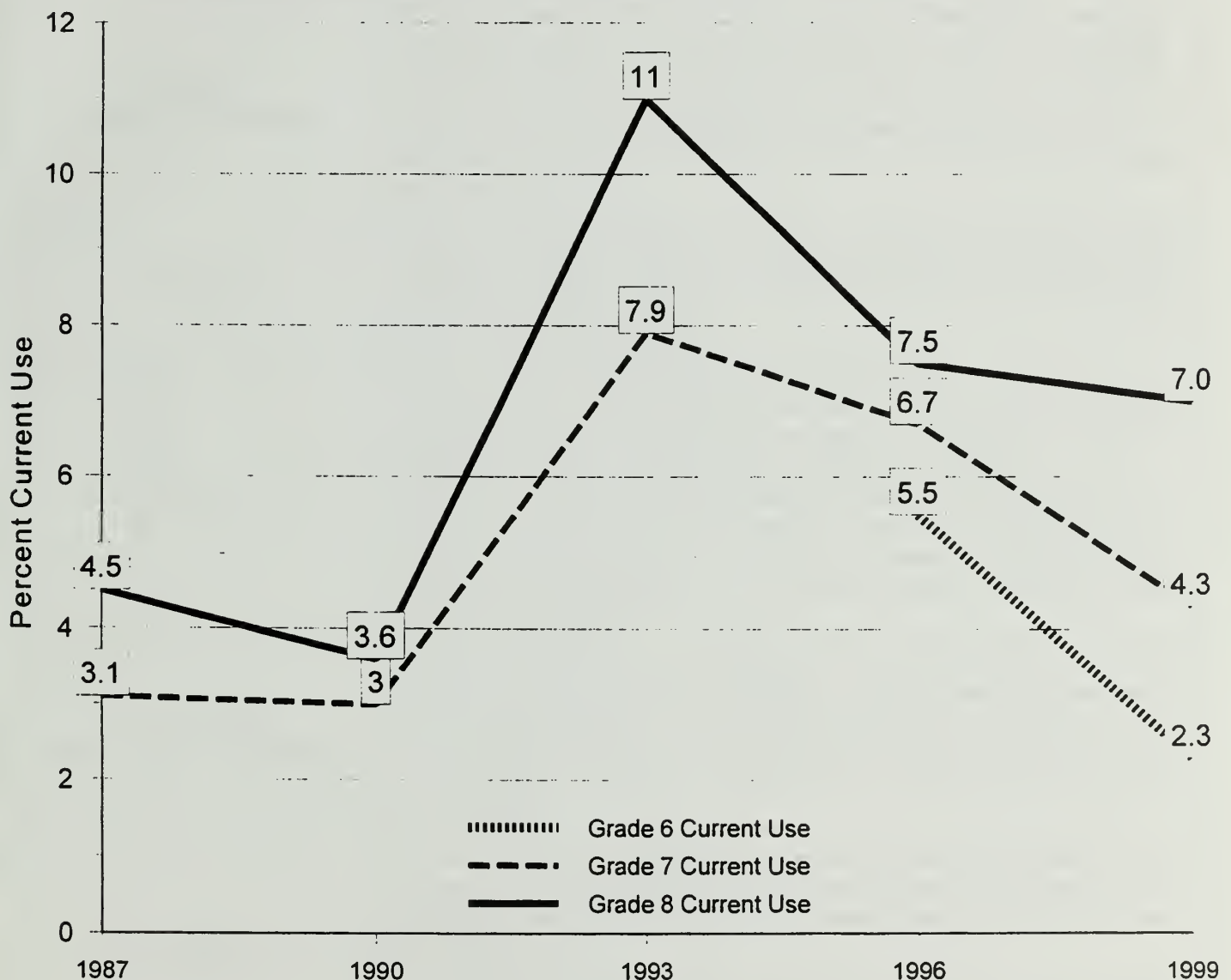


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## Current Use of Inhalants Drops in Massachusetts

- Between 1993 and 1999, Current Use of Inhalants by Massachusetts 7th & 8th Graders Dropped by 30%.
- Between 1996 and 1999, Current Use of Inhalants by Massachusetts 6th Graders Dropped by 58%.

**Massachusetts Inhalant Abuse**  
**Percent Current Use by 6th, 7th & 8th Grade by Year (1987-1999)**



Source: "Trends in Substance Abuse Among Public School Students: Triennial Prevalence Survey, 1984-1999," Massachusetts Department of Public Health, 2000. 1996 is the first year that data for the 6th grade was collected. "Current Use" is defined as any use in the 30 days prior to the administration of the survey.

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## Examples of Inhalant Abuse Prevention Messages

Messages about drug abuse prevention are most often delivered in health or drug abuse prevention classes. However, when we provide inhalant abuse prevention messages, additional approaches should be considered. Because products that are abused as inhalants are found throughout schools, youth programs, and homes, a much broader approach should be used for delivering prevention messages. Often, we can deliver a prevention message about inhalants by adding a few sentences to health and safety messages we are already delivering. *An additional benefit is that we reinforce the association of inhalants as hazardous substances (that is, a poison, toxin, pollutant, and fire hazard) without suggesting or reinforcing the idea that inhalants have a drug-like effect.* Below are listed examples of these messages and where they can be delivered.

### Examples of Inhalant Abuse Prevention Messages

Lessons on Poisons and Pollution	<p>"There are many ways that poisons (or pollution) can get into your body. (Question to class: What are some ways that poisons can get into your body?) One type of poison is a poison that you might breathe. These are chemicals that evaporate or go into the air from paint, glue, gasoline, and all aerosol containers. They are poisonous and can damage our lungs, liver, kidneys, nerves and brain. It is important to keep these poisons out of the air and water and not let them into your body."</p>
Fire Safety	<p>"Some things we have learned about that are flammable or explosive are also dangerous to breathe. All gases and liquids that burn easily or explode, such as gasoline, oil-based paints and thinners, nail polish remover, propane, and butane, are also poisonous to breathe."</p>
First Aid	<p>—"Solvents are poisons that can have harmful effects on our bodies. . . ." —"If we don't use products (like paints, aerosols, gasoline, solvents, art and office supplies, etc.) safely, they can make us feel nauseous, cough, hurt our judgement and, in the long-run, damage our bodies. They can even kill us." —"How can we use these products safely to avoid these effects?" (Use out of doors or in a well-ventilated room, use safety masks with special filters, etc.) —"What should you do if you feel the effects of a solvent?" (Open windows, get fresh air, increase ventilation. . . . If someone has become unconscious, call an ambulance immediately.)</p>
Arts and Crafts, Shops, Labs, Cosmetology	<p>"When we use solvents and solvent-based products (such as, paints, glues, volatile solvents, nail polish, nail polish remover, aerosol hair sprays) we have to take certain precautions. We make sure that we have good ventilation and/or use protective filter masks. We avoid breathing the fumes because they are poisonous and can damage our lungs, liver, kidneys, nerves, and brain. They can also cause sudden death."</p>
Cooking	<p>—"Aerosol cooking oil sprays use propane and iso-butane as propellants. These are fuel gases and we need to be careful when using them around open fires. The propellants are also dangerous poisons to breathe. They can cause brain damage and instant death." —"Whipped cream in cans uses nitrous oxide (an anaesthetic gas) as a propellant. Breathing this industrial gas, even at low levels, can result in nerve damage. Overdoses can cause death by choking, suffocation, or by stopping your breathing."</p>



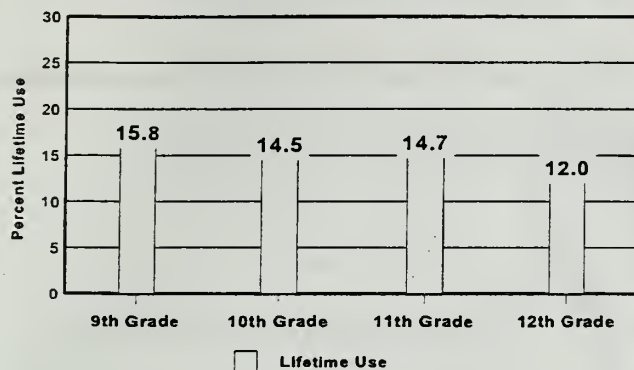




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## Inhalant Abuse Among High School Students By Grade

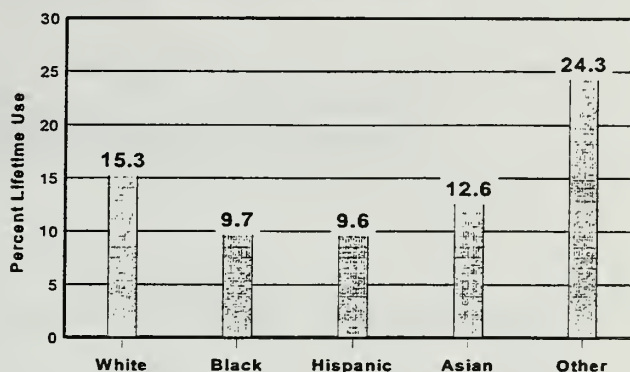
1999 Massachusetts Youth Risk Behavior Survey



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## Inhalant Abuse Among High School Students By Race

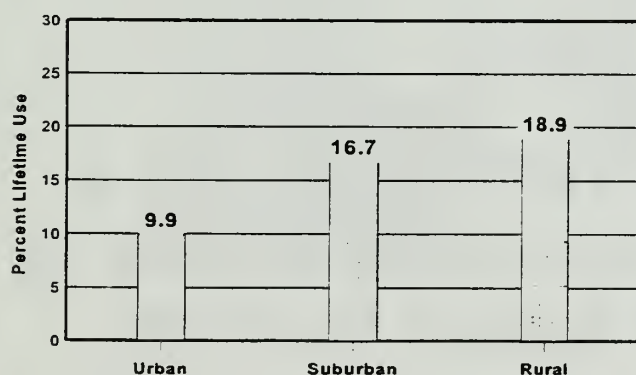
1999 Massachusetts Youth Risk Behavior Survey



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## Inhalant Abuse Among High School Students By Type of Community

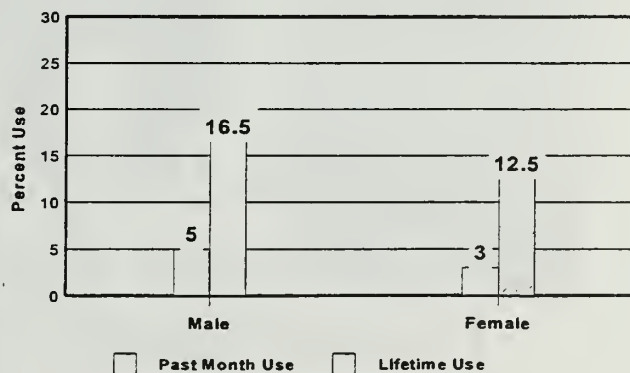
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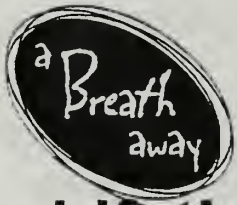


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## Inhalant Abuse Among High School Students By Sex

1999 Massachusetts Youth Risk Behavior Survey

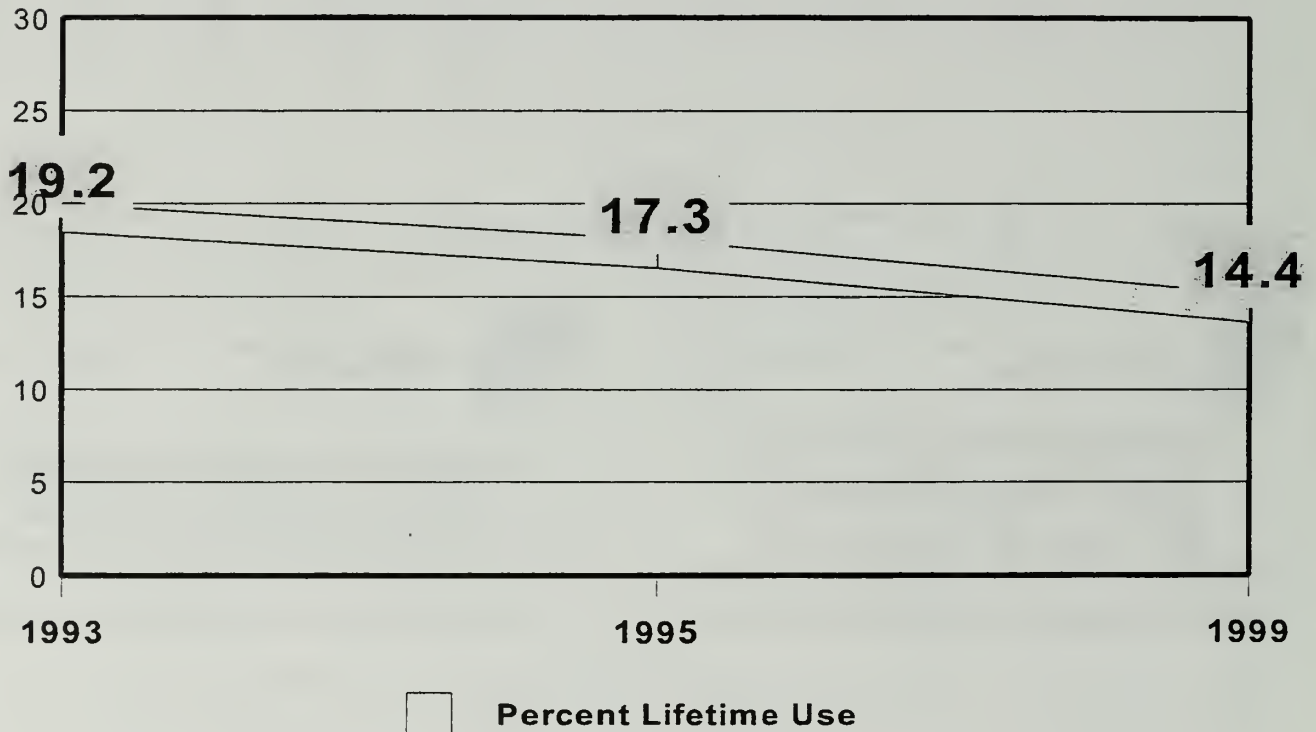




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# Lifetime Inhalant Abuse Among High School Students 1993 to 1996

Massachusetts Youth Risk Behavior Survey



Between 1993 and 1999 there was a 25% decrease in lifetime inhalant abuse by Massachusetts High School Students.

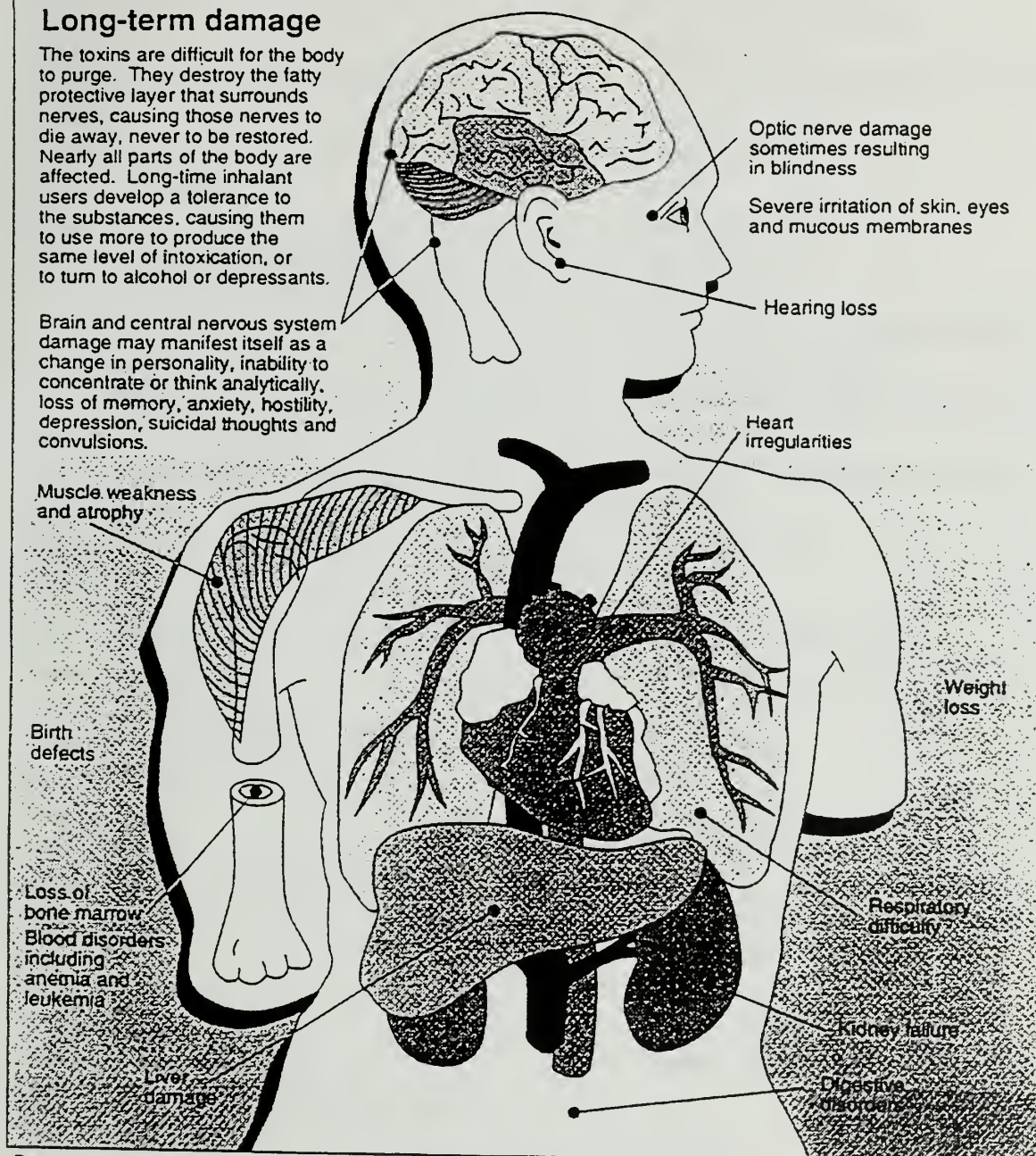


# Inhalant abuse and your body

## Long-term damage

The toxins are difficult for the body to purge. They destroy the fatty protective layer that surrounds nerves, causing those nerves to die away, never to be restored. Nearly all parts of the body are affected. Long-time inhalant users develop a tolerance to the substances, causing them to use more to produce the same level of intoxication, or to turn to alcohol or depressants.

Brain and central nervous system damage may manifest itself as a change in personality, inability to concentrate or think analytically, loss of memory, anxiety, hostility, depression, suicidal thoughts and convulsions.



Research/ Jayne Palmer

Star Tribune graphic/ Ray Grumney



# Inhalant Abuse Check List

- ✓ Kitchen
  - Pam
  - Whipped cream
  - Whippets (Nitrous oxide cartridges)
  - Insecticides
  - Spray cleaners
- ✓ Basement or workshop
  - WD40
  - Fabric protector (Scotch Guard)
  - Paint, cans or spray (especially gold spray paint)
  - Paint thinner
  - Mineral spirits
  - Toluene
  - Paint remover, stripper
  - Lacquer thinner
  - Contact cement
  - Solvent based caulking
  - Contact cleaner
- ✓ School and art supplies
  - Correction fluid
  - Correction fluid thinner
  - Permanent magic markers
  - Dry erase markers
  - Contact cement
  - Rubber cement
  - Ducco® cement, airplane or model glue
  - Spray adhesive
- ✓ Bathroom
  - Hair spray
  - Air freshener
  - Nail polish and nail polish remover
  - Spray deodorant
  - Spray cleaners
  - Asthma spray
- ✓ Garage
  - Gasoline
  - Propane (from barbeque grills, portable torches)
- Carburetor cleaner
- Charcoal starter fluid
- Starter fluid
- Flat tire repair aerosol cans ('Fix-A-Flat')
- ✓ Miscellaneous
  - Freon
    - Air conditioners
    - Refrigerators
    - Spray cans
  - Halon® (from fire extinguisher)
  - Gas cigarette lighters
  - Gas cigarette lighter refills (butane)
  - Lighter fluid
  - Dry cleaning fluid and spot removers
- ✓ Anesthetics
  - Nitrous oxide
    - balloon
    - tanks
    - 'whippets' (mini-tanks)
    - whipped cream cans
  - Ether
  - Chloroform
- ✓ Nitrites
  - Amyl nitrite
  - Butyl nitrite
- ✓ Paraphernalia
  - Plastic bags
  - Paper bags
  - Rags
  - Empty soda cans
  - Empty cologne or perfume bottles

Developed by  
Howard C. Wolfe, MA, LMFT  
821 Massachusetts Ave.  
Arlington, MA 02176  
781-643-7272





# Parents . . .

## Do You Know About Inhalant Abuse?

### Here's What We Know:

- After alcohol, tobacco, and marijuana, inhalants are the fourth most abused substance among seventh-through twelfth-grade students in Massachusetts.
- The highest rates of use are among white eighth- and ninth-grade students.

### Here's What's Being Abused:

- Any product in an aerosol can
- All fuels (gases and liquid)
- Solvent-based correction fluid, markers, glues
- Common shop and household solvents

### Here Are the Dangers of Inhalant Use:

- Breathing these gases and vapors can cause brain, nerve, kidney, and liver damage.
- Death can result from even one-time use. Some children have accidents, choke to death, or have heart attacks.
- For some, inhalant use becomes an addiction. Younger children may just use inhalants, while older youth are more likely to use inhalants with alcohol and other drugs.

### Why Are Teenagers Using Inhalants?

- Inhalants are easy to obtain, free or inexpensive, and difficult to detect.
- Many adults are not aware of inhalants, so use may go unnoticed.
- Many children are not aware of how dangerous these products are.
- It takes effect very quickly.

### Here's What You Can Do About Inhalant Abuse:

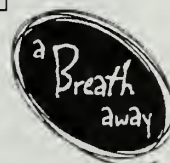
- *Inhalants are poisons.* Please become aware of the problem.
- Educate yourself and other adults about how to prevent inhalant abuse, the types of products that can be abused, and signs of abuse.
- Make sure your children are getting the message about the dangers of alcohol, tobacco and other drug abuse including inhalant abuse.
- Talk to your school principals, teachers, and health educators about including prevention activities in the classroom.
- Don't buy products that can be easily abused. These include air fresheners, solvent-based correction fluids, glues, and magic markers. Instead, buy water-based versions of these products.
- Be aware of how much of an item is being used. When solvent-based products are being used, they should be used with adult supervision.
- If you are concerned about your child's behavior, ask about inhalants and be specific about why you are worried. Remember, one of the attractions of inhalants is that adults don't often ask youth about them.

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*The Voice of Retailing*



A Campaign to Prevent Inhalant Abuse  
Bureau of Substance Abuse Services  
Massachusetts Department of Public Health

## WHAT ARE THE SIGNS OF INHALANT USE?

If you suspect a child or adolescent is using inhalants, look for:

- Empty product containers, especially butane lighters and aerosol cans
- Bags, rags, gauze, or soft drink cans that are used to inhale the fumes
- Paint, gasoline, or glue odors
- An unusual harsh breath odor
- A rash on the face; blisters or soreness around the nose, mouth or on the lips
- Runny nose, sniffing and coughing
- Irritated or glazed eyes and dilated pupils

## HOW MIGHT A PERSON WHO IS USING INHALANTS ACT?

- They may display extreme mood swings, uncontrolled laughter
- Can be agitated or sleepy
- Have increased irritability and anger or violent outbursts
- Have nausea, loss of appetite, vomiting, hallucinations and convulsions
- Display risky behavior or show off

## WHAT SHOULD YOU DO IF YOU FIND A PERSON IN CRISIS FROM USING INHALANTS?

- Lay the person on his or her side to prevent choking on vomit.
- Call an ambulance and stay with the person until he or she sees a doctor.
- See that he or she gets fresh air.
- Avoid distractions and try to keep the person from moving.
- Remain calm. Scaring or chasing the person may increase the risk of a heart attack.

## FOR MORE INFORMATION ABOUT INHALANT ABUSE, CONTACT:

### The Massachusetts Inhalant Abuse Task Force

at CASPAR Youth Support Services, 617-623-2080, [information@CASPARYouth.org](mailto:information@CASPARYouth.org) or at [www.state.ma.us/dph/inhalant](http://www.state.ma.us/dph/inhalant)

### The Massachusetts Substance Abuse Information and Education Helpline

617-445-1500 in the Boston metropolitan area and 1-800-327-5050 statewide (for referrals to treatment)

### Massachusetts Poison Control Center

617-232-2120 or 1-800-682-9211 (for product information)

### Massachusetts Prevention Centers:

**Greater Western MA**  
10 Main Street, 2nd Fl.  
Florence, MA 01062  
Tel: 413-584-3880  
1-800-850-3880  
TTY: 413-586-6598

**Greater Framingham**  
**South Central MA**  
158 Union Avenue  
Framingham, MA 01702  
Tel: 508-875-5419  
TTY: 508-875-5502

**Metro Boston**  
**Southeast MA**  
942 West Chestnut St.  
Brockton, MA 02401  
Tel: 508-583-2350  
1-800-530-2770  
TTY: 508-583-2847

**Boston**  
622 Washington St.  
Dorchester, MA 02124  
Tel: 617-423-4337  
TTY: 617-282-3951

**Merrimack Valley**  
101 Amesbury Street  
Lawrence, MA 01840  
Tel: 978-688-2323  
TTY: 978-975-7778

**West Suburban**  
**North Shore**  
100 Cummings Center  
Beverly, MA 01915  
Tel: 978-524-0561  
TTY: 978-524-0561 x241

**Metro Boston Suburban**  
552 Mass. Ave; Suite 203  
Cambridge, MA 02139  
Tel or TTY: 617-441-0700  
1-888-272-5155

**Greater Worcester**  
**North Central MA**  
531 Main Street  
Worcester, MA 01608  
Tel: 508-752-8083  
1-800-752-8083  
TTY: 508-753-3115

**Southeast Coastal MA**  
651 Orchard Street  
New Bedford, MA 02744  
Tel: 508-994-5084  
1-800-290-5355  
TTY: 508-994-5263

**Lower Pioneer Valley**  
235 Chestnut St.  
Springfield, MA 01103  
Tel: 413-733-0006  
1-877-829-7669  
TTY: 413-734-8062

The Massachusetts Prevention Centers are supported by the Massachusetts Department of Public Health, the Massachusetts Department of Education, and the Massachusetts Executive Office of Public Safety.





## Suggested Action Plan for Inhalant Abuse Prevention

The Massachusetts Inhalant Abuse Task Force encourages schools to take the following steps to prevent inhalant abuse in schools and during school-sponsored activities. For technical assistance, please contact the Inhalant Abuse Task Force at 617-623-2080.

	Date to be completed by	Person responsible for implementation	Date completed or check off if currently in place
<b>1. Environmental Safety</b>	A. Screen currently used office, classroom, art, and shop supplies for safety. Strong smelling supplies may contain solvents. An "AP Non-Toxic" label on art supplies from the Art and Creative Material Institute does not indicate an absence of solvents, since the Institute does not evaluate products for their potential to be abused as inhalants. If in doubt, contact the manufacturer or the Massachusetts Poison Control Center at 1-800-682-9211 or 617-232-2120.		
	B. Review purchases of school supplies. Substitute water-based products for solvent-based products when possible. For example, use low odor dry erase markers and water-based correction fluid, glue (white glues or glue sticks) and paints.		
	C. Where water-based products cannot be used, the use of solvent-based products and gases should be closely monitored. Products should be checked out and checked in, noting the frequency and amount used. Teachers should be aware that rags, handkerchiefs, small bottles, soda cans, and sleeves may be used for the delivery of solvents.		
<b>2. Policy</b>	A. Ban nonessential solvent-based products (such as solvent-based correction fluid and dry erase and magic markers) in schools. Explain that the school is looking for ways to reduce indoor air pollution and poisons in the schools. Avoid labeling products as inhalants or drugs, which may only arouse the curiosity of students and encourage use.		
	B. Review school alcohol and other drug policies to be sure that they address the use of inhalants. In Massachusetts, the use, possession, distribution, purchase or sale of a product for use as an inhalant is illegal (MGL 270-18) and school policy should reflect that.		

# Suggested Action Plan for Inhalant Abuse Prevention

(Page Two)

Date completed or check off if currently in place	Person responsible for implementation	Date to be completed by
3. Education for parents, staff, and community		
A. Provide information to faculty, staff, and school nurses through inservice training and/or printed material. Invite community-based youth-serving professionals.		
B. Educate parents about the dangers of inhalant abuse. Many parents find it difficult to go to evening programs, so consider mailing information to parents. These can be added to school, parent teacher organization or report card mailings. Camera ready copies of parent flyers are available from the Task Force (617-623-2080).		
4. Curriculum Review		
A. Many schools are already teaching health lessons that could incorporate inhalant abuse prevention messages. These topics include poisons, product safety, first aid, and fire safety. Review and revise lessons to add or strengthen inhalant abuse prevention messages. Prevention messages should promote awareness that these products may contain <i>poisons, toxins, pollutants</i> , and/or highly flammable liquids and gases. Procedures for appropriate and safe use of these products should be emphasized. Using this approach associates these products with <i>product safety</i> concerns and <i>poisons</i> instead of <i>drugs</i> .		
B. Because solvents and gases are commonly used in shops, vocational programs, and science and art classes, safety lessons associated with the use of these products should be reviewed to stress the correct use and the consequences of misuse.		
5. Intervention		
A. Is there a procedure in place for a student who is suspected or known to have used inhalants (or any other drug)? Because of the potential for sudden death associated with inhalant use, it is recommended that the school nurse be involved and/or that the student be transported by ambulance to a hospital emergency room to be evaluated.		
B. Is there a procedure in place for alcohol and other drug abuse screenings and/or assessments? Resources are available to assist when schools are concerned that a student may have used an inhalant, but is not in immediate danger. The Massachusetts Substance Abuse Information and Education Helpline can connect you to the closest community outpatient substance abuse counseling program. Youth who are members of managed care programs (such as HMOs and PPOs) can be seen through their system, as appropriate.		